ACE PLUS CORP.

DVI over Single CAT5 Series

EX-G026A

DVI over Single CAT5 Mini-Extender

User Manual

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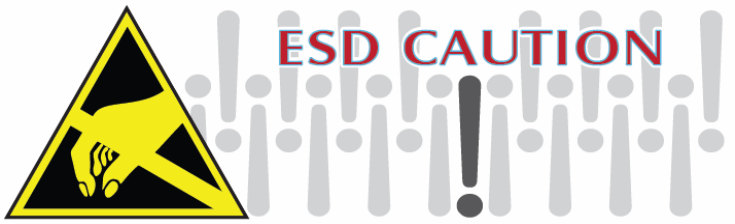
Safety and Notice

The **EX-G026A DVI over Single CAT5 Mini-Extender** has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the EX-G026A should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.
- Do not attempt to service this unit yourself, except where explained in this manual.
- Provide proper ventilation and air circulation and do not use near water.
- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.
- Use only the power adapter and power cords and connection cables designed for this unit.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.



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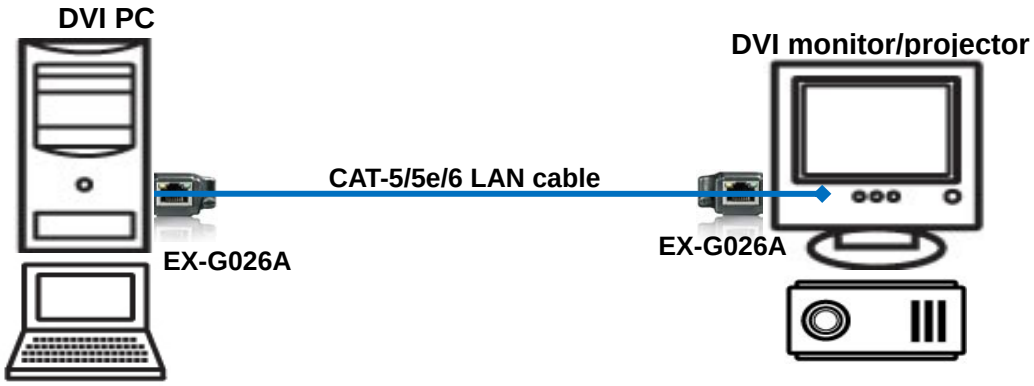
Introduction

The **EX-G026A DVI over Single CAT5 Mini-Extender** extends your PC DVI transmission distance up to 30m (100ft) with resolution 1024x768 @60Hz. With EX-G026A, users can transmit high quality digital video of PC applications through one cost effective CAT-5/5e LAN cable to the remote monitor or projector, instead of using short and expensive DVI cables. With embedded EDID inside the extender, your PC will continue to send the digital video even when the monitor is not connected. The user can then disconnects the monitor, place it in a remote location and reconnect it without rebooting the operating system.

The EX-G026A includes two identical units: transmitting and receiving units. The transmitting unit is connected to your PC DVI output and the receiving unit is connected to the monitor or projector. While successfully connected, the two LED lights on each RJ-45 connector will blink. The transmission distance between the transmitting and receiving units can be up to 30m (100ft) under XGA (1024x768@60Hz) or 15m (50ft) under UXGA (1600x1200@60Hz). With compact size and requiring no power, EX-G026A is the most cost effective choice for bringing your impressive digital video to the remote display.



Features

- DVI 1.1 compliant
- Handy DVI-D to RJ-45 adapters with programmable EDID feature
- Extend the transmission length from the sources up to 30m (100ft) under XGA (1024x768@60Hz) or 15m (50ft) under UXGA (1600x1200@60Hz)
- Identical units work at both transmitting and receiving end. Easy to install.
- No power required
- Compact size
- Direct plug-in
- Perfectly integrated with other DVI over CAT5 series products

The length depends on the characteristics and quality of the cables. Higher resolutions and longer transmission distances require low skew cables (<25ns/100m) for best performance. Unshielded CAT6 with metal RJ-45 connectors is recommended.

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Specifications & Package Contents

Model Name		EX-G027		EX-G026A	
Technical		EX-G027-TX aka EX-G026A	EX-G027-RX	EX-G026A	EX-G026A
Role of usage		Transmitter [TX]	Receiver [RX]	Transmitter [TX]	Receiver [RX]
DVI compliance		DVI 1.1			
HDCP compliance		No			
Video bandwidth		Single-link 165MHz [4.95Gbps]			
Video support		Up to WUXGA [1920x1200@60Hz] & UXGA [1600x1200@60Hz]			
Transmission over CAT5e		1920x1200@60Hz – 30m [100ft] 1024x768@60Hz – 60m [200ft]		1920x1200@60Hz – 15m [50ft] 1024x768@60Hz – 25m [80ft]	
Audio support		No audio for DVI signal			
Equalization		8-level digital at RX		None	
Input TMDS signal		1.2 Volts [peak-to-peak]			
Input DDC signal		5 Volts [peak-to-peak, TTL]			
PCB stack-up		4-layer board [impedance control — differential 100Ω; single 50Ω]			
Input		1x DVI	1x RJ-45	1x DVI	1x RJ-45
Output		1x RJ-45	1x DVI	1x RJ-45	1x DVI
DVI connector		DVI-I [29-pin male digital only]	DVI-I [29-pin female digital only]	DVI-I [29-pin male digital only]	
RJ-45 connector		WE/SS 8P8C with 2 LED indicators			
Rotary switch		None	EQ	None	
Mechanical		**EX-G027**		**EX-G026A**	
Housing		Plastic mold	Metal case	Plastic mold	
Dimensions [L x W x H]	Model	[TX]: 50 x 40 x 20mm [2”x1.6”x0.8”] [RX]: 80 x 60 x 25mm [3.2”x2.4”x1”]		[TX/RX] 50x40x20mm [2”x1.6”x0.8”]	
	Package	270 x 175 x 80mm [10.6”x6.9”x3.2”]		170 x 115 x 40mm [6.7”x4.5”x1.6”]	
	Carton	450 x 370 x 300mm [1’5.7”x1’2.6”x11.8”]			
Weight	Model			46g [1.7 oz]	
	Package			164g [5.8 oz]	
Fixedness		TX: Direct plug-in RX: Wall-mount with screws		Direct plug-in	
Power supply		None	5V 2A DC	None	
Power consumption		1 Watt [max]		0.5 Watt [max]	
Operation temperature		0~40°C [32~104°F]			
Storage temperature		-20~60°C [-4~140°F]			
Relative humidity		20~90% RH [no condensation]			
Package Contents		1x EX-G027 [TX & RX] 1x 5V power adapter 1x User Manual		2x EX-G026A 1x User Manual	

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Hardware Installation

1. Connect your transmitting unit to your PC source.
2. Connect your receiving unit to your remote DVI monitor.
3. Make sure your CAT-5/5e/6 LAN cable is tightly connected and not loose.
4. Enjoy your high quality PC video on the screen.

DVI over Single CAT5 Series Lineup

	EX-G025	EX-G027	EX-G026A	EX-G020
Output to display	HDMI	DVI	DVI	DVI
Transmission over CAT5 at 1024x768@60Hz	25m [80ft]	60m [200ft]	25m [80ft]	30m [100ft]
Transmission over CAT5 at 1920x1200@60Hz	15m [50ft]	40m [130ft]	15m [50ft]	15m [50ft]
Power requirement	No	TX-No / RX-Yes	No	No
Equalization	No	Yes	No	No

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Notice

1. If the DVI or HDMI device requires the EDID information, please use EDID Reader/Writer to retrieve and provide DVI/HDMI EDID information.
2. All HDMI over CAT5 transmission distances are measured using Belden 1583A CAT5e 125MHz LAN cable and ASTRODESIGN Video Signal Generator VG-859C.
3. The transmission length is largely affected by the type of LAN cables, the type of HDMI sources, and the type of HDMI display. The testing result shows solid LAN cables (usually in bulk cable 300m/1000ft form) can transmit a lot longer signals than stranded LAN cables (usually in patch cord form). Shielded STP cables are better suit than unshielded UTP cables. A solid UTP CAT5e cable shows longer transmission length than stranded STP CAT6 cable. For long extension users, solid LAN cables are your only choice.
4. EIA/TIA-568-B termination (T568B) for LAN cables is recommended for better performance.
5. To reduce the interference among the unshielded twisted pairs of wires in LAN cable, you can use shielded LAN cables to improve EMI problems, which is worsen in long transmission.
6. Because the quality of the LAN cables has the major effects in how long transmission distance will be made and how good is the received display, the actual transmission length is subject to your LAN cables. For resolution greater than 1080i or 1280x1024, a CAT6 cable is recommended.

Performance Guide for DVI over LAN Cable Transmission

Performance rating		**Type of LAN cable**		
Wiring	**Shielding**	**CAT5**	**CAT5e**	**CAT6**
Solid	Unshielded (UTP)	★★★	★★★★	★★★★★
	Shielded (STP)	★★★	★★★	★★★★
Stranded	Unshielded (UTP)	★	★★	★★
	Shielded (STP)	★	★	★★
Termination		Please use **EIA/TIA-568-B** termination (**T568B**) at any time		

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Limited Warranty

The SELLER warrants the **EX-G026A DVI over Single CAT5 Mini-Extender** to be free from defects in the material and workmanship for 1 year from the date of purchase from the SELLER or an authorized dealer. Should this product fail to be in good working order within 1 year warranty period, The SELLER, at its option, repair or replace the unit, provided that the unit has not been subjected to accident, disaster, abuse or any unauthorized modifications including static discharge and power surges.

Unit that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for 90 days from the day of reshipment to the BUYER. If the unit is delivered by mail, customers agree to insure the unit or assume the risk of loss or damage in transit. Under no circumstances will a unit be accepted without a return authorization number.

The warranty is in lieu of all other warranties expressed or implied, including without limitations, any other implied warranty or fitness or merchantability for any particular purpose, all of which are expressly disclaimed.

Proof of sale may be required in order to claim warranty. Customers outside Taiwan are responsible for shipping charges to and from the SELLER. Cables are limited to a 30 day warranty and cable must be free from any markings, scratches, and neatly coiled.

The content of this manual has been carefully checked and is believed to be accurate. However, The SELLER assumes no responsibility for any inaccuracies that may be contained in this manual. The SELLER will NOT be liable for direct, indirect, incidental, special, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. Also, the technical information contained herein regarding the EX-G026A features and specifications is subject to change without further notice.

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